

## **CLAIM AMENDMENTS**

This listing of claims will replace all prior versions and listings of claims in the application:

**1-28.** (canceled)

**29.** (previously presented) A vaccine which is protective against *Mycoplasma bovis* mastitis in a bovine species comprising at least one inactivated or attenuated *Mycoplasma bovis* biotype and a pharmaceutically acceptable excipient.

**30.** (previously presented) The vaccine of claim 29, where the vaccine is protective against *Mycoplasma bovis* mastitis in a bovine species following systemic administration.

**31-39.** (canceled)

**40.** (previously presented) The vaccine of claim 30 wherein, when the vaccine is administered to a plurality of cows in a herd of cows, the incidence of mastitis caused by *Mycoplasma bovis* in the herd before administering is greater than the incidence of mastitis caused by *Mycoplasma bovis* in the herd after administering.

**41.** (previously presented) The vaccine of claim 40 wherein the vaccine is administered to at least about 50% of the herd.

**42.** (previously presented) The vaccine of claim 41 where the vaccine is administered together with an adjuvant.

**43.** (previously presented) The vaccine of claim 42 wherein the adjuvant is an aluminum hydroxide-oil emulsion; a mineral, vegetable, or fish oil-water emulsion; a water-oil-water emulsion; incomplete Freund's adjuvant; *E. coli* J5; dextran sulfate; iron oxide; sodium alginate; Bacto-Adjuvant; a synthetic polymer; Carbopol; a poly-amino acid; a co-polymer of

amino acids; saponin; carrageenan; REGRESSIN®; N, N-dioctadecyl-N'-N'-bis(2-hydroxyethyl) propanediamine; a long chain polydispersed  $\beta$ (1,4) linked mannan polymer interspersed with O-acetylated groups; deproteinized cell wall extracts from a non-pathogenic strain of *Mycobacterium*; mannite monooleate; paraffin oil; or muramyl dipeptide.

**44.** (previously presented) The vaccine of claim 30 where the *Mycoplasma bovis* biotype is inactivated and has been inactivated by treatment with: formalin, azide, freeze-thawing, sonication, heat, sudden pressure drop, detergent, lysozyme, phenol, proteolytic enzymes,  $\beta$ -propiolactone, Thimerosal, or binary ethyleneimine.

**45.** (previously presented) The vaccine of claim 44 where the *Mycoplasma bovis* biotype has been inactivated by treatment with  $\beta$ -propiolactone.

**46-56.** (canceled)